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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,071	09/04/2001	Masanobu Asaoka	35.C15758	1151

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EXAMINER
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SCHWARTZ, PAMELA R

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/944,071

Applicant(s)

ASAOKA ET AL.

Examiner

Pamela R. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15 and 18-25 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13, 15 and 18-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 13, 15, 18-25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6,830,790 in view of Kawasaki et al. (EP 893270). The commonly assigned patent claims disclose a recording medium having an ink receiving layer containing alumina hydrate with a BET specific surface area of 100 to 160 m<sup>2</sup>/g formed by applying a coating liquid followed by drying, swelling the layer by pressing the layer to a heated mirror finish drum, having a glossiness at 20° of 20% or more, including a fibrous substrate having a sizing degree of 100 sec or more, a basis weight of 150 to 180 g/m<sup>2</sup> and having a surface layer thereon.

The claims refer to a surface layer on the support but do not disclose the composition of this layer. Referring to the specification for clarification of what this layer

is intended to be, a layer of barium sulfate is disclosed (see col. 3, line 58 to col. 4, line 37). Therefore, when read in light of the specification, the claims of the patent read upon the limitation of instant claims 18 and 19.

The secondary reference discloses that it is known to use plate-like alumina hydrate because it is superior in suppressing cracking and is excellent in film-formability (p. 4, lines 6-14). Based upon this disclosure, it would have been obvious to one of ordinary skill in the art to use plate-shaped alumina hydrate as the alumina of the primary reference based upon its known superior properties in ink receiving layers.

2. Claims 13-18 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano et al (6,511,736) in view of Kawasaki et al. (EP 893270).

Asano et al. disclose an ink jet recording material having excellent gloss and high color density (abstract). The material comprises a substrate and a multi-layered ink fixing layer, each of which comprises pigment and binder. The pigment may be alumina, however, the crystallinity of the alumina is not specified (see col. 2, line 36 to 51). The outermost ink fixing layer is formed by a cast-coating method (see col. 2, lines 50-51). The reference discloses the use of a paper support of wood pulp (col. 4, lines 64-65). The support preferably has a basis weight of 20 to 400 g/m<sup>2</sup> and a sizing degree of 1 to 200 sec. at a basis weight of 100 g/m<sup>2</sup> (col. 5, lines 43 to 55). The medium may have an undercoat of pigment and binder (see col. 6, lines 15-32). Included as pigments are silica, zinc oxide, aluminum oxide and calcium carbonate. The ink fixing layer contains pigment in the form of secondary particles which have a average particle size of 1 micron or less, most preferably 20 to 100 nm (see col. 9, lines

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39-47, 52-56 and 63-67). The pigment is present in an amount of 50 wt% or more (see col. 11, lines 11-22) and the binder is present at a ratio of 1 to 200 parts by weight per 100 parts by weight of the pigment (col. 12, lines 39-46). The cast-coated layer is formed using a specular casting drum. The coating composition may be coated and dried, then rewetted with water and pressed onto the heated specular surface of the drum and dried (see col. 15, lines 30-42). The reference does not disclose specular gloss in terms of 20°, however, it measures gloss in terms of 75°, and clearly has identified gloss as a desired property that can be measured and should be achieved, and identifies the re-wet caste method to achieve gloss on the outer layer. Based upon this disclosure, it would have been obvious to one of ordinary skill in the art to control the process in order to achieve the desired level of gloss.

Finally, the reference does not disclose the specific surface area of the pigment. This is a well-known property of pigments and is used as a measure of the porosity and ability to absorb ink, a critical property in the field of ink jet recording. Therefore, it would have been obvious to one of ordinary skill in the art to control the conventional property of specific surface area of the pigment in the ink receiving layer in order to achieve desired ink absorption and ink drying speed for the medium.

With respect to the type of alumina included, since the primary reference is silent with respect to crystallinity and shape, one of ordinary skill in the art would have looked to the state of the art to determine alumina to use in forming the medium of the primary reference. The secondary reference discloses that it is known to use plate-like alumina hydrate because it is superior in suppressing cracking and is excellent in film-formability

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(p. 4, lines 6-14). Based upon this disclosure, it would have been obvious to one of ordinary skill in the art to use plate-shaped alumina hydrate as the alumina of the primary reference for its known superior properties in ink receiving layers.

3. Claims 13, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano et al (6,511,736) in view of Kawasaki et al. (EP 893270) and further in view of either of Hosoi et al. (6,200,670) or Ikezawa et al. (5,759,673). The first two references are relied upon as set forth above.

Ikezawa et al. teach an ink jet recording sheet having a fibrous substrate and an undercoat layer which may contain an inorganic pigment such as calcium carbonate, zinc oxide, etc. (see col. 3, lines 12-18, col. 4, lines 50-58, col. 5, lines 5-15). A white pigment is usually used to whiten the overall appearance of a medium. Hosoi et al. teach an ink receiving medium having a paper substrate and a barium sulfate containing underlayer (col. 5, lines 42-59 and col. 6, lines 19-33). The barium sulfate is used for its ink solvent absorbency and to provide smoothness to the medium. Based upon these teachings in the prior art, it would have been obvious to one of ordinary skill in the art to include barium sulfate in the underlayer or intermediate layer of the primary reference in order to whiten the medium, increase smoothness or increase ink absorbency in the layer. It would have been obvious to include barium sulfate in lieu of other white inorganic pigments or in addition to other equivalent pigments for these purposes.

4. Applicant's arguments with respect to claims 13, 15 and 18-25 have been considered but are moot in view of the new ground(s) of rejection.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela Schwartz whose telephone number is (571) 272-1528.

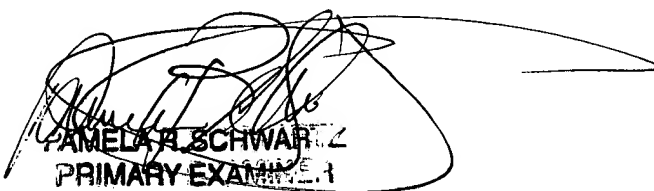
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PRSchwartz  
May 13, 2006



PAMELA R. SCHWARTZ  
PRIMARY EXAMINER